

**REMARKS**

In response to the Office Action mailed 3 May 2005, the Applicants respectfully request the Examiner to reconsider the above-captioned application in view of the above amendments and the following comments.

Claims 19-28 were previously pending in this application. The Examiner has rejected all of these claims. With this Amendment, Claims 19 and 28 have been amended and Claims 27 and 36 have been canceled. With entry of this Amendment, Claims 19-26 and 28-35 are now pending in this Application.

**Response to Rejection of Claims 19-36 under §112**

The Examiner has rejected Claims 19-36 for failing to enable the claim limitation “typical velocity of an operation engine ambient inlet airflow”. While the Applicants disagree with this rejection, Claims 19 and 28, which included this language have been amended to resolve this problem. The remaining rejected claims depend from Claims 19 and 28, and therefore the Applicants submit that the amendment of these two claims resolves this issue associated with this language with regard to all pending claims in this case.

The Examiner also notes that the Applicant has not claimed the specific mechanism, *i.e.*, suction or blowing, that will occur when the structure the Applicant has claimed is used, pointing out that unclaimed details of the geometry might differ depending on the mode of operation chosen. The specification of the application states that suction and blowing may each be used in different embodiments of the invention. The Applicants note that both modes of operation may fall within the scope of a single claim, such as Claim 19.

The Examiner also suggests that the disclosure does not state which of these two modes is the best mode. However, there is no basis for rejection because no particular mode is labeled the best mode under §112, as long as the substance of the mode the inventor considers the best mode is not concealed. By disclosing multiple operative

modes, no concealment of the best mode has taken place, and so there is no basis for a rejection related to concealment of the best mode.

This apparent rejection of a generic claim on the basis that it does not limit itself to a single mode, and that it is not clear which mode within its generic scope is the best mode is not supported in the MPEP or statutory language. Therefore, the Applicants suggest that this rejection does not properly apply to the claims as amended, and respectfully requests that the Examiner withdraw this rejection from the claims.

The Examiner has also rejected Claims 27 and 36 under §112, first paragraph, for the lack of enablement of specific examples related to particular types of jet engines. The Applicants have canceled these elements from the claim set by canceling claims 27 and 36. Rejections with regard to these claims were also raised under §112, second paragraph. The cancellation of these two claims addresses those rejections as well.

The Examiner has rejected claims 19-36 for failing to specifically point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner states that one of ordinary skill in the art could not determine from the claims whether the claimed apparatus is intended to be used in the suction or injection mode.

While the Applicants concede that the rejected Claims do not specify either a suction or injection mode, the Applicants note that both modes of operation are described within the specification, and that the *claimed* structure is generic to both modes of operation. As both modes of operation are possible with the claimed structure, and both modes of operation are enabled in the text, the claims are generic to both modes of operation. A claim is not indefinite simply for being generic or for including multiple embodiments within its scope. While the Examiner states that details may differ depending upon the mode of operation, if these details are not claimed, then they are not an appropriate grounds for a claim rejection. The Applicants therefore request that the Examiner reconsider his rejection of these claims on the basis of §112, second paragraph.

The Examiner has also rejected Claims 19-26 under §112 for using the term “inlet fan duct outer wall”. The Examiner suggests that because this element, identified by reference number 22 (see Figure 1, for example), is located on the inner surface of the nacelle, that this term is not clear. The Applicants respectfully disagree that this term is “not clear”, and suggest that a proper reading of the specification shows this term to plainly point out and define the claimed element.

Specifically, the Applicants note that while the Examiner is correct that the surface indicated by reference numeral 22 and identified by the term “inlet fan duct outer wall” is located on the *inner* surface of the nacelle 20, that this surface of the nacelle represents the *outer* wall of the inlet fan duct 14. Thus, while the surface 22 is the inner wall of the nacelle, it represents the outer wall of the inlet fan duct comprising the space inside the nacelle.

This usage is consistent in the application, and is explained beginning in paragraph 0011 of the Applicants’ specification. Further, it can be seen that in locations where the described flow passages have annular cross sections, for instance in the bypass flow stream 30 shown in Figure 1, the surface referred to as bypass duct outer wall 27 is still located on the inner surface of the nacelle 20, while the bypass duct inner wall would be located on the outer surface of the nose splitter 24. In short, “outer” in “inlet fan duct outer wall” refers to the outer wall relative to the volume of the duct, rather than to the outer surface of the nacelle.

The Applicants submit that they have adequately identified and defined the term “inlet fan duct outer wall” in the specification, both in the text, beginning in paragraph 0011 and through the Figures, in which examples of this element are indicated by reference numeral 22. With such definition made clearly in the specification, the Applicants submit that this term is clear and definite, and respectfully request that the Examiner reconsider the rejection on the basis of the clarity of this claim element.

Finally, The Examiner rejects Claims 23 and 32 under §112, second paragraph, because the claims cannot be construed in view of Figure 4, because Figure 4 does not show all the limitations as claimed. The Applicants submit that all the elements of these

claims *are* found in Figure 4. Specifically, the elements of the second end 84 of the fluid duct 80, the body 86 of the fluid duct 80, the width 88 of the body 86 and the width 92 of the second end are all labeled and identified in the text of the application (see paragraphs 0019 and 0026, for example), as well as being shown in Figure 4.

The Applicants also note that while these rejected claims recite “wherein said second end is smaller in width than said body”, that this limitation is clearly defined in terms of the identified elements, despite the fact that Figure 4 is not drawn to scale. That Figure 4 is not drawn to scale is understood by the text of paragraph 0008 stating that Figure 4 is “a *schematic* side-elevation, cross-sectional view”.

In light of these facts, the Applicants submit that Claims 23 and 32 are able to be construed clearly and consistently in light of Figure 4, and therefore request that the Examiner withdraw the rejection to these claims on this basis.

**Response to Rejection under §103 in view of Nayfeh et al.**

The Examiner has rejected independent Claims 19 and 28, as well as Claims 20-27 and 29-36, which depend from Claims 19 and 28, as being unpatentable in view of Nayfeh et al. The Applicant respectfully traverses this rejection and requests that the Examiner reconsider this rejection in light of the amendments made above and the discussion provided below.

Specifically, the Applicant notes that the Examiner has suggested that Nayfeh discloses increased attenuation rates of sound with decreasing boundary layer thickness. Nayfeh, however, does not discuss any particular structure associated with altering the boundary layer thickness. Nayfeh provides examples of how overall sound levels would be altered based on varying velocity profiles across a duct, but does not provide any indication of *how* to provide such a velocity profile. The Applicants’ disclosure and claims are directed to specific systems and methods, including structural elements, to accomplish a change in velocity along the inlet fan duct outer wall. No such structure is disclosed in Nayfeh, nor is any method for producing the suggested velocity profiles taught by Nayfeh.

Furthermore, there is no suggestion of a method or technique making use of the claimed fluid duct. A *prima facie* case for a rejection under §103(a) requires that all the elements be disclosed, taught, or suggested by the combination of the cited references. The cited reference does not disclose, teach or suggest any structure that accomplishes the described velocity profiles, nor does it disclose any technique for producing the velocity profiles that Nayfeh describes. Without these teachings, a *prima facie* case under §103 has not been made.

Because all of the elements of independent Claims 19 and 28 have not been taught, disclosed, or suggested by the cited reference, the Applicants submit that Claims 19 and 28 are patentable over Nayfeh. Therefore, the Applicants respectfully request that the Examiner withdraw this §103 rejection from independent Claims 19 and 28, as well as those Claims which depend from these Claims, specifically Claims 20-26 and 29-35.

**Response to Rejection under §103 in view of Howell**

The Examiner has rejected independent Claims 19 and 28, as well as Claims 20-27 and 29-36, which depend from Claims 19 and 28, as being unpatentable in view of U.S. Patent No. 3,735,593 to Howell. Although the Applicant respectfully disagrees with these rejections, Claims 19 and 28 have been amended to more clearly demonstrate the claimed subject matter. The Applicants submit that the amended Claims are patentable over Howell, and respectfully request that the Examiner withdraw this §103 rejection from these claims.

Specifically, the Applicants note that Howell does not disclose a first end of the fluid duct that is located upstream of the fan rotor. Examination of the Howell reference shows that Howell is not intended to alter the flow speed adjacent to the inlet fan duct, but rather to bleed excess pressure from the immediate vicinity of the fan rotor tips. Therefore, not only does Howell not teach or suggest all of the elements of Claims 19 and 28, but Howell does not even teach the use of any of its disclosed features for the claimed purposes of Claims 19 and 28.

Because Howell does not disclose, teach or suggest all the claimed features of Claims 19 and 28 as amended, the Applicants submit that these claims are patentable over

Application No. 10/664,695  
Amendment dated 2 August 2005  
Reply to Office Action of 3 May 2005

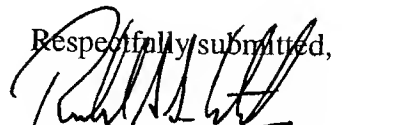
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Howell and respectfully request that the Examiner withdraw this §103 rejection from these Claims, as well as those Claims that depend from Claims 19 and 28, namely, Claims 20-26 and 29-35.

**Conclusion**

In light of the discussion and amendments made above, the Applicants request that the Examiner reconsider the rejection of currently pending Claims 19-26 and 28-35 and pass these Claims to allowance. If any issues remain unresolved, particularly issues related to the Applicants, the Examiner is invited to telephone the Applicant's counsel at the number provided below so that a resolution can be most effectively reached.

Respectfully submitted,

  
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2 Aug 2005  
Date

August 3, 2005

Amendment w/Certificate of Mailing

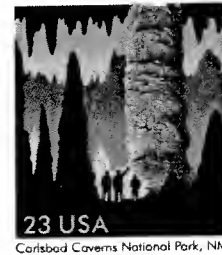
The following ~~patent application~~ ~~/XXXXXXXXXXXXXXXXXXXX~~  
has been received by the Patent  
Office on the date stamped below.

Inventor K. Mani, et al.

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